

REMARKS**Claim Disposition**

Claims 1 – 34 are pending in the application. Claims 1 – 6, 8 – 12, 20, 23 – 28, and 30 – 34 have been rejected. Claims 7, 13-19, 21, 22, and 29 have been allowed. Claims 1, 12, 20, and 23 have been amended to clarify that which the Applicants consider their invention. The amendments provide further clarification of the invention. No new matter is added. Claim 34 has been cancelled.

Claim Rejections – 35 U.S.C. § 102(b)

Claims 1 – 6, 8 – 12, 20, 23 – 28, and 30 – 33 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,048,630 to Schaffer. Applicants respectfully contend that Schaffer does not teach or disclose each element of the invention. The Examiner states:

“As per claims 1, 2, 3, 4, 12, 20, 23, 24, 25, and 26, Schaffer discloses a torque assist function responsive to a signal indicative of an input device torque for providing a torque-assisting command to a motor on column 3; a steering-pull compensator responsive to a signal indicative of a valid detection cycle for modifying said torque assist command to the motor by an offset corresponding to a detected steering condition on lines 59-63, on column 3, and lines 42-46, on column 9 at least one summing function in signal communication with said torque assist function and with said steering-pull compensator for summing the provided torque assist command with the offset corresponding to a detected input device pull-condition on line 36-41, on column 9; a filter responsive to the signal indicative of input device torque on lines 27-32, on column 9; and a condition processing block for determining if the vehicle is being driven in substantially straight path on lines 42-45, on column 9.”

“As per claims 5, 6, 8, 9, 10, 11, 27, 28, 30, 31, 32, and 33, Schaffer discloses an enable block for validating the detected steering-pull condition on lines 42-45, on column 9; an enable switch for receiving a binary control signal from the enable block on lines 42-47, on column 9; a memory switch for receiving its own signal at its primary input terminal in figure 6; a function block for providing a signal to non-inverting input of the summing function in figure 6, the box that shows $T_p = T_p + \Delta t_1$.”

To anticipate a claim under 35 U.S.C. §102, a single source must contain all of the elements of the claim. Lewmar Marine Inc. v. Barent, Inc., 827 F.2d 744, 747, 3 U.S.P.Q.2d 1766, 1768 (Fed. Cir. 1987), cert. denied, 484 U.S. 1007 (1988). Moreover, the single source must disclose all of the claimed elements "arranged as in the claim." Structural Rubber Prods. Co. v. Park Rubber Co., 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. Titanium Metals Corp. v. Banner, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

As to Claims 1, 2, 3, 4, 12, 20, 23, 24, 25, and 26 Applicants respectfully contend that Schaffer does not teach or disclose each element of the invention "arranged as in the claim". Specifically, with respect to Claims 1, 20, and 23, Schaffer does not teach or disclose, "a torque-assist function responsive to a signal indicative of an input device torque for providing a torque-assist command to an electric motor; and a steering-pull compensator responsive to a signal indicative of a valid detection cycle for modifying said torque-assist command to the electric motor by an offset corresponding to a detected steering-pull condition." Schaffer is drawn to a hydraulic steering system including a hydraulic actuator. Schaffer does not teach or disclose an electric motor or a controller with a torque assist function as claimed. In fact, there is no controller with a torque assist function taught by Schaffer. Schaffer does not disclose or teach an element of the invention, therefore, it cannot anticipate the Applicants' claims. Thus, Claims 1, 20, and 23 are allowable, the rejections are improper, and they should be withdrawn.

In addition, Schaffer does not teach or disclose, "a steering-pull compensator responsive to a signal indicative of a valid detection cycle ...". There is no teaching in Schaffer as to a valid/invalid detection cycle, nor a signal indicative thereof. Once again, Applicants respectfully acknowledge the Examiners responses concerning this terminology. However, Applicants respectfully submit that the Examiner mischaracterizes the teachings of Schaffer in this regard. To support the rejection the Examiner in the Response to Arguments refers to col. 9, lines 42 – 46. However, Shaffer at col. 9, lines 42 – 46 does not teach a detection cycle but rather a range of driving shaft deflection for operability of the trim system therein. There is no teaching that this range is a detection cycle, it is as stated a range of operation. The detection cycle is clearly taught in the specification as being a time duration relative to ignition. A range of operation is not

equivalent to evaluation of a detection cycle to determine its validity as taught in the specification and claimed. Therefore, because Schaffer does not disclose or teach an element of the invention it cannot anticipate the Applicants' claims. Thus, Claims 1, 20, and 23 are allowable, the rejections are improper, and they should be withdrawn.

With respect to Claims 2 and 24, these Claims include the limitations distinguished above for Claims 1, 20, and 23, thus, they cannot be anticipated by Schaffer. In addition, there is no teaching of a torque assist command in Schaffer. Once again, Schaffer teaches a hydraulic actuator with trim control. There is no teaching whatsoever of a torque assist command to a motor in Schaffer. Thus, Claims 2 and 24 are allowable, the rejections are improper, and they should be withdrawn.

With respect to Claims 3 and 25, once again, these claims include the limitations distinguished above for Claims 1, 20, and 23, thus, they cannot be anticipated by Schaffer. Moreover, contrary to the Examiner's suggestion, there is no disclosure of "a filter responsive to the signal indicative of input device torque" in the section relied upon by the Examiner. The Examiner in the Response to Arguments draws the conclusion that Schaffer is teaching filtering when he suggests 30 -60 samples over a duration of 30 seconds. However, Applicants respectfully submit that the Examiner has mischaracterized the teaching of Schaffer. The sections relied upon disclose teachings with respect to sampling signals and observation, not filtering. In fact, at Col. 9, lines 31- 36 Schaffer clearly teaches that the sampling approach employed is to affect a sufficient resolution of the torque changes, not to affect filtering. One skilled in the art would clearly recognize that this is a distinction between filtering and sampling. Thus, Claims 3 and 25 are allowable, the rejections are improper, and they should be withdrawn.

With respect to Claims 4, 5, 6, 8, 9, 10, 11, 27, 28, 30, 31, 32, and 33, Applicants respectfully contend that these claims include the limitations distinguished above for Claims 1, 20, and 23, thus, they cannot be anticipated by Schaffer. Thus, Claims 4, 5, 6, 8, 9, 10, 11, 27, 28, 30, 31, 32, and 33 are allowable, the rejections are improper, and they should be withdrawn.

Furthermore, Applicants respectfully contend that the Examiner has mischaracterized the teachings of Schaffer. Schaffer does not teach or disclose, "the condition processing block for determining if the vehicle is being driven in a substantially straight path" nor "an enable block for validating the detected steering-pull condition," nor

does Schaffer teach or disclose "an enable switch" as in claim 6. The Examiner also relies upon Figure 6. There is no teaching or disclosure of an enable block for validating the detected steering-pull condition nor and enable switch in Figure 6. Furthermore, to support the rejection the Examiner in the Response to Arguments relies upon the teachings of Schaffer at Col 3, lines 46 – 50. However, Applicants respectfully contend that the Examiner is mischaracterizing the teachings of Schaffer. The Examiner suggests that the disclosure of Col. 3 lines 46 – 50 teaches, "the condition processing block for determining if the vehicle is being driven in a substantially straight path" of Claim 4. The Examiner further relies on the same disclosure of Col. 3, lines 46 – 50 as the "enable block for validating the detected steering-pull condition". While Shaffer may disclose that the control circuit is effective ... with the steering wheel close to straight ahead position, this disclosure can not be equivalent to both "a condition processing block" ... and "an enable block". Applicants respectfully contend that Schaffer may disclose one of these claimed elements, but clearly cannot disclose both. Moreover, with regard to claim 6 specifically there is no disclosure regarding the enable switch. . Therefore, because Schaffer does not disclose or teach an element of the invention it cannot anticipate the Applicants' claims. Thus, Claims 4, 5, 6, 8, 9, 10, 11, 27, 28, 30, 31, 32, and 33 are allowable, the rejections are improper, and they should be withdrawn.

Claim Rejections - 35 U.S.C. § 103(a)

Claims 34 stands rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,048,630 to Schaffer in view of U.S. Patent No. 5,339,243 to Matsuoka et al.

Applicants respectfully direct the Examiner's attention to note that Claim 34 has been cancelled.

Applicants further note that the facilitate prosecution Applicants direct the Examiner's attention to note the following regarding the suggested combination of Schaffer and Matsuoka:

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the

skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996). See MPEP 2143.

Establishing a prima facie case of obviousness requires that all elements of the invention be disclosed in the prior art. *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970).

Further, even assuming that all elements of an invention are disclosed in the prior art, an Examiner cannot establish obviousness by locating references that describe various aspects of a patent applicant's invention without also providing evidence of the motivating force which would have impelled one skilled in the art to do what the patent applicant has done. *Ex parte Levengood*, 28 U.S.P.Q. 1300 (Bd. Pat. App. Int. 1993). The references, when viewed by themselves and not in retrospect, must suggest the invention. *In Re Skoll*, 187 U.S.P.Q. 481 (C.C.P.A. 1975).

Finally, for an obviousness rejection to be proper, the Examiner must meet the burden of establishing ... that the proposed modification of the prior art must have had a reasonable expectation of success. MPEP 2143.02. Moreover, the suggested modification cannot change the principle of operation of a reference. MPEP 2143.01.

Applicants respectfully contend that the Examiner has mischaracterized the teachings of at least Schaffer and/or Matsuoka. There is no justification or motivation for the suggested combination of references. There is clearly no teaching whatsoever in Schaffer, Matsuoka, or the art that would motivate the suggested combination. Clearly, such a combination is merely the result of improper hindsight by merely locating in the references the various elements of the claims. First, Schaffer is directed to a hydraulically controlled trim control power steering system, while Matsuoka is directed to failure detection in an electric power steering system. Clearly, there is no teaching whatsoever in the totality of Schaffer, Matsuoka, or the art that would motivate the suggested combination. The examiner specifically suggests that such teaching is provided at Col 8, lines 33 – 37. However the only teaching at Col. 8, lines 33 -- 37 is directed to detail of the operation of the hydraulic valve therein. Contrary to the Examiner's assertion, there is

no disclosure what so ever that "use of an electric motor would offer the same advantages of a hydraulic cylinder" as claimed by the Examiner. Therefore, because there is no motivation to combine the references as cited, they may not be employed to render the Applicants' claims unpatentable.

Moreover, it is evident from the teachings of Schaffer that such a combination as suggested would be improper. The suggested combination would clearly render each of the cited references inoperable. See MPEP 2143.02. Schaffer specifically teaches employing a hydraulic actuator to perform the trim function disclosed therein. To modify the teachings of Shaffer with an electric motor as taught by Matsuoka would completely render the system of Schaffer inoperative. Namely, placing the electric motor of Matsuoka in the hydraulic control system of Schaffer. There is no provision for replacing the hydraulic actuator with an electric motor. Furthermore, for example the rotary valve for detecting the torque imbalance and displacing flow accordingly (See Col 3 lines 30 – 43), would clearly be inoperative with the electric motor of Matsuoka as there would be no means for implementing the detection and actuation of the torque bias as taught by Schaffer. Moreover, such a modification would completely change the principle of operation of both of the cited references See MPEP 2143.02. There is clearly no combination of the cited references that would not change the principle of operation for both references. This is further evidence that the references cannot reasonably be combined.

The arguments and amendments here presented are made for the purposes of better defining the invention, rather than to overcome the rejections for patentability. The claims have not been amended to overcome the prior art and therefore, no presumption should attach that either the claims have been narrowed over those earlier presented, or that subject matter or equivalents thereof to which the Applicants are entitled has been surrendered. Support for these amendments can be found in the specification and claims as originally filed. No new matter has been introduced. Allowance of the claims is respectfully requested in view of the amendments and following remarks. Moreover, no amendments as presented alter the scope of the claimed invention and therefore cannot necessitate a new grounds rejection.

It is believed that the foregoing remarks are fully responsive to the Office Action and that the claims herein should be allowable to the Applicants. Accordingly, reconsideration and withdrawal of the rejections are requested.

In the event the Examiner has any queries regarding the instantly submitted response, the undersigned respectfully requests the courtesy of a telephone conference to discuss any matters in need of attention.

If there are additional charges with respect to this matter or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully Submitted,

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By 

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